BLM

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

Boulevard Ridge Lop and Scatter Maintenance Project
DOI-BLM-UT-G010–2016–0023-EA

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Vernal Field Office
170 South 500 East
Vernal, Utah 84078 USA
435–781–4400

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Prepared by
U.S. Department of the Interior
Bureau of Land Management
Vernal Field Office
Vernal, Utah

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Chapter 1. Introduction

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1.1. Introduction

The Environmental Assessment (EA) has been prepared to analyze the Boulevard Ridge project. The EA is an analysis of potential impacts that could result with the implementation of a proposed action or no action alternative. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). A Decision Record (DR), which includes a FONSI statement, is a document that briefly presents the reasons why implementation of the selected alternative will not result in "significant" environmental impacts (effects) beyond those already addressed in the Vernal Resource Management Plan (2008). This document provides the environmental assessment for Burnt Timber projects.

1.2. Identifying Information:

Boulevard Ridge Lop and Scatter Maintenance Project, DOI-BLM-UT-G010–2016–0023 EA, Lop and Scatter of Pinyon and Juniper Trees

1.2.1. Location of Proposed Action:

Location:

Uintah County, Vernal, Utah

Township 13 South, Range 25 East, Sections 8, 17–20, 23–26, 30; SLB&M..

1.2.2. Name and Location of Preparing Office:

Lead Office - Vernal Field Office and number NEPA # DOI-BLM-G010-2016-0023 EA

1.3. Purpose and Need for Action:

The purpose of the Boulevard Ridge project is to maintain and potentially increase quality habitat for mule deer, elk and bison, and to reduce and mitigate an increase in buildup of hazardous fuels to prevent the potential for large catastrophic fire events, and to restore natural fire regimes. The proposed action is needed to maintain the project area.

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Chapter 2. Proposed Action and Alternatives

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This EA focuses on the Proposed Action and No Action Alternatives. The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action.

2.1. Description of the Proposed Action:

This project (932 acres) would entail utilizing a lop and scatter method to remove pinyon and juniper (P-J) that has regenerated after chaining and mastication projects were done in 1961, 1975 and 2012. Historically, Boulevard Ridge was chained and seeded in 1961 and several areas adjacent to the initial project were chained and seeded in 1975 to improve forage conditions and reduce hazardous fuel loads. As a result of project not being maintained over the years, heavy regeneration of the P-J trees occurred in some areas, creating tree densities too high for a lop and scatter project, thus a mastication project was completed in 2012 on 392 acres of the previous chaining projects. Since 2012 no maintenance has not been done in the project area. By removing the current Phase I regrowth of P-J, we will be reducing the cost and effort substantially to maintain and improve the mountain browse vegetation. Boulevard Ridge is heavily utilized by elk as a seasonal winter range and by deer as a transitional range. BLM and UDWR have been and are currently working on Boulevard Ridge with management goals to improve and maintain mountain browse and sagebrush vegetation, improve and increase mule deer and elk habitat, and improve the transitional range for mule deer. Maintenance of this area is critical to maintain understory vegetation and reducing the cost of the project markedly by removing the P-J when in phase I regrowth. Livestock who utilize the project area for grazing will similarly benefit from maintained and improved vegetation. The removal of the P-J regrowth will also help to reduce any hazardous fuels accumulation to lessen the potential for a large catastrophic fire event.

The lop and scatter methodology, involves using a hand crew with chainsaws to cut, delimb, and scatter the P-J trees. The lop and scatter treatment will result in bark, sawdust, limbs and other tree parts being left on the ground after the treatment is completed. In the project area, the P-J trees are increasing in overall density into the project area, with an average density of approximately 200 stems/acre or less.

The vegetation in and near the project area is comprised of two-needle pinyon, Utah juniper, mountain browse, sagebrush, grass and forbs . The sagebrush and shrub vegetative types have been designated as a Fire Regime Group III (fire return interval 35-60 years) and the P-J vegetation type has been designated as a Fire Regime Group I (fire return interval 35–100 years; Vernal Fire Management Plan, 2005). This project area recently acted as a fire break for the Wolf Den fire. One of the objectives of this project is to maintain this already treated project area as a fire fuel break.

The project area still has an adequate understory vegetation to protect the soil from erosion, following removal of the P-J trees. The project has been designated to provide some edge effect in order to increase the habitat values for wildlife, and to maintain the natural openings where the mountain shrub habitat is located. The proposed action is designed to remove P-J regrowth only. Sites that contain mature P-J trees, (for this document, mature is defined as greater than 26” dbh) as determined by the soils and vegetation mapping completed by the NRCS in the Uintah Area Soil Survey (persistent P-J) are mapped out and would not be treated. In addition, no Ponderosa Pine trees would be treated.

No new access roads would be needed to access the project area and access would be via existing roads and trails. No treatment work would be allowed during times of saturated soil conditions, to reduce soil disturbance and the creation of ruts.

In order to prevent the establishment of weeds within the project area as a result of the proposed action, the following measures would be incorporated to reduce the risk of noxious and invasive weeds from becoming established:

1. A pre-project weed inventory would be conducted to determine the presence of noxious weeds. If weeds were found, they would be: a) mapped and reported; b) removed or treated prior to surface disturbance; c) and removed or treated prior to seed set when possible.

2. All vehicles and equipment would be power-washed after driving through a noxious weed infestation.

3. Staging areas would be located in weed free sites.

4. Annual monitoring of the project area for weed establishment would occur for three years following implementation of the proposed action.

5. Annual treatments of weeds would be conducted under the authority of existing Vernal Field Office Pesticide Use Proposals, and following existing policy (Vernal Field Office Surface Disturbing Weed Policy 2009).

No chemicals subject to SARA Title III in amounts greater than 10,000 pounds would be used. No extremely hazardous substances as defined in 40 CFR 355 in threshold planning quantities would be used.

2.2. Description of Alternatives Analyzed in Detail:

2.2.1. No Action Alternative

Under this alternative, no restoration actions or fuel reductions would be taken. Current resource conditions and trends would continue.

2.3. Alternatives Considered but not Analyzed in Detail

Prescribed Fire: The use of prescribed fire to remove the P-J was considered but eliminated. The rationale for not using prescribed fire is the high risk for establishment and invasion of cheatgrass and other noxious weeds in the area following a fire event. In addition the dense canopy that surrounds the project area provides for a heavy and continuous fuel load, which if ignited, would be difficult to control without constructing fuel breaks with heavy equipment. Thus, this alternative was not considered as it would not be feasible to conduct a prescribed burn under these existing conditions.

Mastication Treatments: The use of mastication machinery to achieve the hazardous fuel reduction objective was considered but eliminated. This treatment would encompass the use of machinery to crush and chop the trees. The density of P-J trees is approximately 200 stems/acre

or less. With that low density of trees, manually cutting the trees down is a more cost effective method to use for removing the regenerated P-J. The use the large equipment for the project would also increase disturbance to the soils and vegetation within the project area, which could increase the opportunity for invasive and noxious weeds to establish. This alternative was not considered because it would increase the cost of the project substantially to reduce the accumulation of hazardous fuels, thus, wasting financial resources.

2.4. Conformance

The alternatives considered in this EA are in conformance with the Vernal Resource Management Plan Record of Decision (2008). The specific citations are listed below:

Fire and Fuels Management:

P. 78, FIRE-4: Hazardous fuel reduction activities will be implemented primarily through the use of prescribed fire and managed wildland fire. In some cases, chemical and/or mechanical treatments will be used in conjunction with fire. Where social and/or resource constraints preclude the use of fire, mechanical and/or chemical treatments will be used.

Rangeland Improvements:

P. 105, Goals and Objectives: Restore, maintain, and/or improve rangeland conditions and productivity to maintain, meet or make substantial progress towards meeting BLM Utah Standards for*Rangeland Health and Guidelines for Grazing Management* while meeting forage obligations in grazing permits and grazing preference decisions, as well as wildlife habitat.

Vegetation:

P. 135, VEG-4: Manage the vegetation to attain the ecological stage that will benefit wildlife in crucial habitat and livestock grazing. Manage vegetation in remaining areas that results in high vegetation species diversity.

P. 135 VEG-5: Allow mechanical, fire, biological, cultural, or chemical methods for vegetation manipulation using the type of manipulation appropriate to and consistent with other land use objectives, and incorporating standard operating procedures and BMP's, as applicable, to protect other resources.

Wildlife and Fisheries:

P. 142, WL-10: Wildlife habitat improvement projects will require consultation with UDWR on job design, construction techniques, and project feasibility.

P. 144, WL-27: Improve or increase forage through vegetation treatments that will setback the seral stage of crucial use areas, and, if necessary, re-seed areas with a variety of native and adapted non-native plant species.

2.4.1. Relationships To Statutes, Regulations and Other Plans

Uintah County's General Land Use Plan, as amended in 2011 relative to public land concerns: All alternatives considered in detail in the EA would be consistent with the County's general planning objectives which state:

- To insure that public lands are managed for multiple use and sustained yield and to prevent waste of natural resources.
- To support the wise use, conservation and protection of public lands and its resources including well-planned management prescriptions.
- Management of forage resources directly affect water quality and water supplies.
- The proper management and allocation of forage on public lands is critical to the viability of the Basin's agricultural, recreation, and tourism industry.

Federal Statues and Regulations.

- Protection of Timber Act of September 20, 1922 (42 Stat. 857; U.S.C. 594).
- Taylor Grazing Act of June 28, 1934 (48 Stat. 1269; U.S.C. 315).
- Reciprocal Fire Protection Act of May 27, 1955(69 Stat. 66; 42 U.S.C. 1856, 1856a).
- Economy Act of June 30, 1932 (47 Stat. 417; 31 U.S.C. 686).
- Federal Land Policy and Management Act of 1976 (FLPMA) (Public Law 94-579; 43 U.S.C. 1701).
- Disaster Relief Act, Section 417 (Public Law 93-288).
- 2001 Annual Appropriations Acts for the Department of the Interior.
- United States Department of the Interior Manual (910 DM 1.3).
- 2009 Guidance for Implementation of Federal Wildland Fire Management Policy.
- 2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update).
- 1998 Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy and Procedures.
- 1998 BLM Handbook 9214, "Prescribed Fire Management" describes authority and policy for prescribed fire use on public lands administered by the Bureau of Land Management.
- September 2000. Managing the Impacts of Wildfires on Communities and the Environment: a report to the president in response to the wildfires of 2000.
- April 2013. The National Cohesive Wildland Fire Management Strategy: Phase III Western Regional Action Plan. Report of the western regional strategy committee.

2.4.2. Public Scoping

The proposed project was posted to the BLM eplanning website on March 1, 2016. A public scoping letter was submitted by Southern Utah Wilderness Alliance as a result of this posting. Their letter identified the following issues. A summary of how these issues were addressed is also included below.

- BLM should conduct an updated wilderness inventory prior to authorizing the project.
  - Inventories for wilderness characteristics have been conducted as disclosed in the Chapter 3.
- BLM should review a range of alternatives including:
  - BLM should seek to remove any vegetation treatments from designated LWCs in order to maintain wilderness characteristics of these areas.
    - A no action alternative is considered
    - The area does have wilderness characteristics and is classified as a Class III area. The area is leased for oil and gas development thus the area was not designated as a natural area because the wilderness characteristics could not be protected, preserved or maintained.
  - Protecting wilderness characteristics
    - This EA is not a decision document, so protection of wilderness characteristics is beyond the scope of this document. However, impacts to wilderness characteristics are disclosed in chapter 4.
  - Reducing and/ or permanently removing livestock grazing.
    - This is out of the scope of this document.
  - Modifying the fire suppression regime.
    - This is out of the scope of this document.
  - Protect other resources such as cultural, air, water, soil, and vegetation.
    - This EA is not a decision document, so protection of these resources is beyond the scope of this document. However, considerations of impacts to these resources are documented or addressed in Appendix A or Chapter 4.
    - We included a no action alternative.
- BLM must provide site-specific data that analyses how current vegetation conditions differ from those defined in the Ecological Site Description for the project area. If the ESD for the project area indicated that the site supports a pinyon-juniper ecosystem, then BLM's "encroachment" theory lacks a scientific basis and there is a high likelihood that "restoration" to a non-pinyon-juniper ecotype will be unsuccessful.
  - The site does support pinyon-juniper ecotypes. Historically the area was chained and masticated to achieve management objectives for grazing and wildlife. The area has and still does act as a firebreak to protect surrounding areas. The BLM is not using encroachment as a need for the lop and scatter treatment. We are treating regrowth of the pinyon and juniper trees to maintain as sagebrush-steppe habitat and also as a fuel break. Stems per acre were evaluated as mentioned in Chapter 2.
- BLM should provide empirical data showing the status of the mule deer and elk habitat in the project area over the last 20-50 years.

- Existing environment and impacts to big game habitat are disclosed in chapters 3 and 4. Habitat data for the last 50 years and population data can be obtained through the Utah Division of Wildlife.

- BLM must thoroughly consider the impacts from the proposed project and develop extensive monitoring plans to track the efficacy of the treatments.
  - Photos plots will be established before and after the project is implemented. Density transects will also be completed to determine stems per acre before and after the treatment. Monitoring of regrowth after the project is completed will help determine whether follow-up treatments are needed for the project area.

- BLM should disclose the proposed project's impacts on climate change and climate change's impact on vegetation in the project area including quantification of greenhouse gas emissions and quantification of carbon released into the atmosphere.
  - Contribution to greenhouse gas emissions from the proposed action was considered as documented in Appendix A and determined to not reach an impact level that may help make a reasoned choice among alternatives or may be related to a potentially significant effect.

- BLM must address the cumulative and indirect impacts from off-road vehicle use, domestic livestock grazing and other foreseeable uses and impact to the public lands.
  - Impacts to these resources are disclosed in Appendix A or chapter 4.

- BLM must address impacts from climate change, increased drought, and invasive and non-native vegetation in the project area.
  - Impact of climate change and drought are beyond the scope of this project.
  - Invasive and non-invasive vegetation has been addressed in Chapters 3 and 4.

- BLM should address carbon sequestration.
  - The proposed action would not impact established pinion juniper stands. It targets pinion juniper regrowth in sagebrush steppe where historical treatments have taken place.

- BLM should consult with the Utah State Historic Preservation Office and the Tribes.
  - Consultation is documented in chapter 5 and Appendix A. A class II cultural resource evaluation was done.

Chapter 3. Affected Environment:

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3.1. Introduction:

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values) of the project area as identified by the interdisciplinary team analysis and as presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2. General Setting

Boulevard Ridge is located near the Atchee Ridge road approximately 2 miles east of Massey Junction and 8 miles west of the Utah/Colorado state line in the Book Cliffs, Uintah County, Utah. The project area occurs on a fairly large topographical plateau. The vegetation in the area consists of two needle pinyon, Utah juniper, mountain big sagebrush, and black sagebrush.

3.2.1. Fuels and Fire Management

Fuels Management:

The project area vegetation is primarily a mountain big sagebrush, pinyon pine and Utah juniper vegetation group with minor amounts of shrubs including: mahogany and serviceberry and various grasses and forbs. This ecological site is determined by the upland shallow loam found on site. The treatments will affect the amount and arrangement of fuels which has a direct impact on fire behavior..

The mountain big sagebrush has been designated as fire regime group III where the historic natural fire interval is between 35-100 years. The project area has also been designated as a class II condition class. The condition class II designation indicates that the area has gone at least one fire interval period between fire events. Due to this alteration in the fire regime and corresponding change in the fire condition class there has been an increase in the overall fuel loadings. The slashing units are in mountain sagebrush communities with regrowth of juniper trees. Sagebrush sites have experienced significant pinyon pine and Utah juniper infilling and expansion during the last century in the Uintah Basin area. Pinyon pine and Utah juniper have expanded into landscapes once dominated by an assemblage of sage-brush grasses, forbs, and shrubs. The expansion of pinyon pine and Utah juniper woodlands affects soil resources, water and nutrient cycles, forage production, wildlife habitat, biodiversity, plant communities, plant structure and fire patterns across the landscape. Another impact of the changing vegetation is the shift from historic fire regimes to larger and more intense wildfires that are increasingly determining the future of the landscape. A healthy sagebrush system is more adapted to withstand downy brome (*bromus tectorum*) and other exotic weed species after fire and other disturbances.

“Managing sagebrush-steppe and pinyon-juniper woodlands to reduce woody fuels and restore healthy native perennial herbaceous vegetation is the most effective way to mitigate the spread of cheatgrass and slow large scale land cover conversion. Ecosystems with healthy native perennial herbaceous vegetation and low tree density are less likely to experience severe wildfire and more likely to recover to a desirable state following fire” (Rau 2014).

Fire Management:

Mountain big sagebrush with vegetation heights of 3-4 feet tall if ignited would result in 10-15 feet flame lengths. The vegetation mix of pinyon pine and Utah juniper with heights of 12-15 feet in a sagebrush community would result in 30-40 foot flame lengths if ignited.

3.2.2. Invasive Plants/Noxious Weeds and Vegetation

3.2.2.1. Invasive Plants/Noxious Weeds

Invasive plants and noxious weeds documented in and around the proposed project area(s) include cheatgrass (*Bromus tectorum*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), and black henbane (*Hyoscyamus niger*). Of these, black henbane is a State of Utah Class 2(Control) noxious weed and Canada thistle is a State of Utah Class 3 (Containment) noxious weed.

3.2.2.2. Vegetation

There are several plant communities present in and around the project area including: pinyon-juniper (*Pinus edulis* and *Juniperus oseteosperma*) woodlands, Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) sagebrush-steppe, mixed desert shrub (*Atriplex* spp., *Krascheninnikovia lanata*,) shrublands, and greasewood (*Sarcobatus vermiculatus*) flats. Other dominant plant species present may include: Utah serviceberry (*Amelanchier utahensis*), mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*), Great Basin wildrye (*Leymus cinereus*), Salina wildrye (*Leymus salina*), mountain-mahogany (*Cercocarpus montanus*), and western wheatgrass (*Pascopyrum smithii*).

3.2.3. Plants: Utah BLM-Sensitive

Barneby catseye (*Cryptantha barnebyi*)

Barneby catseye is a Utah BLM-Sensitive plant species that is endemic to the Uinta Basin in eastern Utah. A member of the borage family (Boraginaceae), this perennial herb/sub-shrub grows 15 to 35 centimeters tall, has gray-green leaves, and is covered in bristly, yellowish hairs. Barneby catseye produces white funnelform flowers with obvious yellow fornices from May to June. Barneby catseye grows on tan to white shale hills derived from the Green River Formation in pinyon-juniper, ryegrass, mountain-mahogany, and mixed desert shrub plant communities at 5,600 to 7,200 feet elevation. There are known locations of this species within three miles of, and habitat likely exists within, the proposed project area(s).

Graham beardtongue (*Penstemon grahamii*)

Graham beardtongue is a Utah BLM-Sensitive plant species endemic to the Uinta Basin of Utah and the Piceance Basin of Colorado. This showy member of the plantain family (Plantaginaceae) is a small, dark green herbaceous rosette that produces one to several shoots of large, pink, bilaterally symmetric flowers from mid-May to mid-June. Graham beardtongue grows on tan to white shale hills derived from the Green River Formation in pinyon-juniper, ryegrass, mountain-mahogany, and mixed desert shrub plant communities at 4,600 to 6,800 feet elevation. There are known locations of this species within two miles of, and habitat likely exists within, the proposed project area(s).

Graham beardtongue is a Penstemon Conservation Agreement species.

White River beardtongue (*Penstemon scariosus* var. *albifluvis*)

White River beardtongue is a Utah BLM-Sensitive plant species endemic to the Uinta Basin of eastern Utah. This perennial and herbaceous member of the plantain family (Plantaginaceae) has a woody caudex with multiple stems that have linear to lanceolate green leaves. From May to June, White River beardtongue produces numerous lavender to blue-purple bilaterally symmetric flowers. White River beardtongue grows on tan to white shale hills derived from the Green River Formation in pinyon-juniper, ryegrass, mountain-mahogany, and mixed desert shrub plant communities at 4,600 to 6,800 feet elevation. The closest known location of this species is approximately six miles from the proposed project area. However, habitat likely exists within the proposed project area(s).

White River beardtongue is a Penstemon Conservation Agreement species.

All three species occupy similar habitat (pinyon-juniper communities on Green River shale) and each species has been documented growing with one or the other although all three species have not been seen together.

3.2.4. Lands with Wilderness Characteristics (LWC)

The BLM evaluated 34 units for Wilderness Characteristics in 2007. Of these units a total of 17 had either recent or historic vegetation treatments which were identified by an interdisciplinary team. Of the 17 units with vegetation treatments, 12 of the treatments evaluated were found to retain their wilderness character with vegetation treatments not being identified as noticeable to the casual observer. Five of the units identified vegetation treatments as having noticeable intrusions to wilderness character (See 2007 inventory for Cliff Dweller, Lower Flaming Gorge, Mountain Home, Seep Canyon, and Wolf Point units.) Of the five the dominant noticeable vegetation treatment was the chaining method which involved heavy equipment dragging a chain between equipment (generally two bull dozers) and uprooting trees along the way. In heavy or dense pinyon-juniper trees, the chainings were identified as noticeable intrusions based on large piles of dead uprooted trees being left behind. Lop and scatter was noticeable as an intrusion in dense areas, however it was determined that the casual observer would not notice the lop and scatter as an intrusion within 1-3 years of the project completion.

Approximately 978 acres of the project area are located within an area (Bitter Creek, 33,487 acres) that was found to have wilderness characteristics in 2007 by a BLM interdisciplinary team. Although the area was found to have wilderness characteristics, it was not designated as a natural area in the Vernal RMP ROD (2008). The ROD (pg. 33) stated that the area would not be designated as a natural area because: “The area is considered high potential for oil and gas (O&G) development. 23,569 acres (70%) of the total area is currently leased for O&G development. Wilderness characteristics could not be protected, preserved or maintained”. As of this writing, approximately four treatment projects totaling 1,342 acres of Bullhog mastication treatment have been completed in the Bitter Creek unit. None of the Bullhog mastication treatment projects cumulatively or individual detracted from the 2007 inventory evaluation for wilderness character for the Bitter Creek unit.

3.2.5. Wildlife

3.2.5.1. Migratory Birds

The Migratory Bird Treaty Act (MBTA), was implemented for the protection of migratory birds. Unless permitted by regulations, the MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition to the MBTA, Executive Order 13186 sets forth the responsibilities of Federal agencies to further implement the provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that Federal actions evaluate the effects of actions and agency plans on migratory birds. The Utah Partners In Flight (UPIF) has prioritized migratory birds that are considered "most in need of conservation action, or at least need to be carefully monitored throughout their range within Utah." These are also the species "that will be most positively influenced by management as well as those species with the greatest immediate threats" according to UPIF (Parrish et al. 2002). In addition, The Utah Steering Committee has identified approximately 542,967 acres of Bird Habitat Conservation Area's (BHCA) within the Vernal Planning Area (USC 2005). BHCA's are intended to display areas where bird habitat conservation projects may take place, predicated on concurrence, collaboration, and cooperation with all landowners involved; however, the BHCA's have no official status. Within the planned project area no BHCAs have been designated.

Numerous species may migrate through, or nest within the project area. This section identifies migratory birds that may inhabit the project area, including species that are classified as High-Priority birds by Partners in Flight, according to the habitat types found within the project area: *Sagebrush-Steppe;* sage sparrow, sage thrasher, Brewer's sparrow, prairie falcon, green-tailed towhee, and Swainson's hawk, *Pinyon-Juniper Woodlands;* black-chinned hummingbird, gray flycatcher, gray vireo, Lewis' woodpecker, Clark's nutcracker, pinyon jay, juniper titmouse, Virginia's warbler, broad-tailed hummingbird, Cassin's finch, mountain bluebird, and Northern goshawk.

3.2.5.2. Raptors

Some of the more prominent birds that may utilize the project area and surrounding areas include Northern goshawk, golden eagles, red-tailed hawks, prairie falcons, and ravens. The BLM has reviewed district files and completed a field visit for raptor nesting and migratory bird habitat within all lands up to ½ mile of the proposed project, no known raptor nests were identified within the project area. Rocky outcrops, pinyon-juniper woodlands and sagebrush shrub land habitats in and around the project area have the potential to provide diverse breeding and foraging habitat for raptors.

3.2.5.3. Non-USFWS Designated (Big Game Species)

Mule deer and Rocky Mountain elk are the primary big game species found within the project area and bison may occur occasionally (UDWR 2008, 2010). Use typically occurs from spring to winter, when elk and deer utilize the project area for foraging, thermal cover and escape cover. Both species have an extremely variable diet and therefore live in a variety of habitats. They consume a combination of grasses, forbs, and shrubs. Food consumption and availability is also associated with the season of use. During winter, elk move to lower elevations where they

are found most often on south facing slopes, primarily in P-J woodlands. Deer typically move down to lower elevation foothill areas.

Crucial elk wintering habitat has been designated within the project area. This designation was made in the Vernal Field Office RMP (BLM 2008).

Other wildlife species that are likely to occur in the project area include black bear, mountain lion, coyote, and bobcat, as well as a large variety of small mammals. Many of these species are habitat generalists and are not tightly restricted to specific habitat types.

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Chapter 4. Environmental Effects:

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4.1. Introduction

This Chapter analyzes the direct and indirect impacts that the proposed action and the no action alternative have on the resources identified in Chapter 1 and explained in Chapter 3. It also analyzes the cumulative impacts expected from other land use activities and recognizes actions that could take place in the reasonably foreseeable future.

4.2. Alternative A — Proposed Action

4.2.1. Fuels and Fire Management

Fuels Management:

The proposed action would change the species composition, hazardous fuel arrangement and fuel height. The proposed action will reduce the pinyon pine and Utah juniper species in the sagebrush community. The direct impact would be the removal of competition for brush, grass and forb species. The taller fuels would be reduced to less than 3 feet in height and scattered. The short term would increase the availability of dead fuels before the slashing debris lost red needles and broke down over a few year period.

Fire Management:

The increase in species diversity would benefit the recovery of vegetation in the event of a wildland fire. Removing the taller pinyon pine and Utah juniper trees and scattering the debris throughout the project area would decrease flame lengths and allow firefighters more opportunities to reduce the spread of a wildland fire in the event of an ignition.

4.2.2. Invasive Plants/Noxious Weeds and Vegetation

4.2.2.1. Invasive Plants/Noxious Weeds

Invasive plants and noxious weeds have the potential to be spread and or introduced to areas of surface disturbance. However, because the pinyon and juniper will be mulched or downed trees left on site, surface disturbance (exposure of bare soil) will be limited, thus minimizing the potential for invasive plants and noxious weeds to spread. In addition, avoidance of infested areas of the invasive plants and noxious weeds identified in Chapter 3 (especially black henbane and Canada thistle) by equipment and personnel will prevent their spread. Known infestations of black henbane, bull thistle, Canada thistle, and any new infestations in the proposed project area will be spot treated with an upland herbicide mix (Curtail + Telar XP) prior to fuel reduction treatments. Continued treatment of infestations will also help reduce the spread of noxious weeds. Additional mitigation to prevent the spread of noxious weeds will include power washing all equipment and vehicles prior to entering and after leaving the project area(s).

4.2.2.2. Vegetation

Under the proposed action, pinyon and juniper trees would be cut or masticated from sagebrush-steppe plant communities within the project area. Although there would be a loss of pinyon and juniper trees, it would be a direct benefit to the sagebrush and other plant species

present in the area. The removal of trees would directly benefit in sagebrush-steppe plant communities by the release from competition for resources such as light, water, and nutrients. While reducing fuel loads, the removal of trees should also result in increased abundance of sagebrush-steppe shrubs, forbs, and grasses. Approximately 932 acres of sagebrush-steppe habitat will be maintained as sagebrush-steppe habitat.

4.2.3. Plants: Utah BLM-Sensitive

Barneby catseye (*Cryptantha barnebyi*), Graham beardtongue (*Penstemon grahamii*), and White River beardtongue (*Penstemon scariosus* var. *albifluvis*)

Under the proposed action, pinyon and juniper trees would be cut or masticated within sagebrush-steppe habitat by mechanical means. Although proposed action would result in disturbance adjacent to potential habitat, actual tree removal would only occur in the adjacent sagebrush-steppe plant community. Where Barneby catseye, Graham beardtongue, and White River beardtongue and their habitat occur near treatment areas, potential impacts include increased habitat disturbance, pollinator disturbance, pollinator habitat loss/disturbance, and subsequent impacts to reproduction. Potential impacts to reproduction, and pollinators in general, can be minimized by conducting treatments outside of flowering season (May-June). In addition, use of existing roads and two-tracks, especially in potential habitat, will minimize any potential impacts. Because Barneby catseye occupies the same habitat as Graham beardtongue and White River beardtongue, adherence to the mitigation measures (below) for the beardtongues will protect Barneby catseye as well.

4.2.3.1. Mitigation

1. Training on the identification of special status plant species and their habitat will be provided to all personnel working on this project.

2. The project area(s) will be surveyed by BLM-authorized botanists prior to any treatments. Avoidance areas would be identified, as well as areas that need additional botanical inventory (habitat assessments and/or clearance surveys) All necessary surveys will be completed prior to the removal of pinyon and juniper within 50 feet of areas of suitable habitat for all three species. If any of the three species are located within 50 feet of treatment areas the following measures will apply:

    a. Mechanical treatments will occur outside of flowering season, to be confirmed by a BLM-authorized botanist.

    b. Any mechanized equipment or vehicles will be restricted to existing two tracks, roads, or disturbance.

    c. All piling and chipping of trees would occur at least 50 feet away from Barneby catseye, Graham beardtongue, and White River beardtongue individuals.

3. All treatment areas will be downslope of occupied habitat for these species, so runoff from upslope treatment will not occur.

4. No pinyon or juniper will be removed from suitable habitat for all three species, as delineated by a BLM-authorized botanist.

Based on the above mitigation measures, the proposed action may affect, but is **not likely to lead to federal listing** for Barneby catseye, Graham beardtongue, and White River beardtongue.

4.2.4. Lands with Wilderness Characteristics (LWC)

The BLM evaluated 34 units for Wilderness Characteristics in 2007. Of these units a total of 17 had either recent or historic vegetation treatments which were identified by an interdisciplinary team. Of the 17 units with vegetation treatments, 12 of the treatments evaluated were found to retain their wilderness character with vegetation treatments not being identified as noticeable to the casual observer. Five of the units identified vegetation treatments as having noticeable intrusions to wilderness character (See 2007 inventory for Cliff Dweller, Lower Flaming Gorge, Mountain Home, Seep Canyon, and Wolf Point units.) Of the five the dominant noticeable vegetation treatment was the chaining method which involved heavy equipment dragging a chain between equipment (generally two bull dozers) and uprooting trees along the way. In heavy or dense pinyon-juniper trees, the chainings were identified as noticeable intrusions based on large piles of dead uprooted trees being left behind. Lop and scatter was noticeable as an intrusion in dense areas, however it was determined that the casual observer would not notice the lop and scatter as an intrusion within 1-3 years of the project completion.

Approximately 978 acres of the project area are located within an area (Bitter Creek, 33,487 acres) that was found to have wilderness characteristics in 2007 by a BLM interdisciplinary team. Although the area was found to have wilderness characteristics, it was not designated as a natural area in the Vernal RMP ROD (2008). The ROD stated that the area would not be designated as a natural area because: “The area is considered high potential for oil and gas (O&G) development. 23,569 acres (70%) of the total area is currently leased for O&G development. Wilderness characteristics could not be protected, preserved or maintained” (p.33 of the ROD). As of this writing, approximately four treatment projects totaling 1,342 acres of Bullhog mastication treatment have been completed in the Bitter Creek unit. None of the Bullhog mastication treatment projects cumulatively or individual detracted from the 2007 inventory evaluation for wilderness character for the Bitter Creek unit.

4.2.5. Wildlife

Migratory Birds

As identified in Chapter 3, migratory bird species may be present during the breeding/nesting season from March 1- August 31 in the project area. If project operations were to take place during the breeding/nesting season, individual bird species could be impacted. Potential effects of the Proposed Action on avian species include 1) direct loss of nests, eggs and nestlings 2) indirect disturbance from human activity during the breeding/nesting season can cause nest abandonment and 3) reduction and/or fragmentation of nesting and foraging habitat. By following the mitigation measure outlined below these impacts would be minimized or completely negated.

Mitigation Measures:

Project activities are planned to occur after August 31 to minimize impacts during the breeding and nesting seasons for migratory birds. The proposed project targets younger pinyon-juniper trees that are not older, mature stands of pinyon-junipers which are favored by most pinyon-juniper bird species. Although there may be some short-term direct impacts to pinyon-juniper bird species,

the long term benefit of the project would benefit sagebrush/grassland bird species, several of which are currently identified as BLM State Sensitive Species.

Raptors

As identified in Chapter 3, raptors may be present during the breeding/nesting season from March 1- August 31 in the project area. If project operations were to take place during the breeding/nesting season, individual bird species could be impacted. Potential effects of the Proposed Action on avian species include 1) direct loss of nests, eggs and nestlings 2) indirect disturbance from human activity during the breeding/nesting season can cause nest abandonment and 3) reduction and/or fragmentation of nesting and foraging habitat. By following the mitigation measure outlined below these impacts would be minimized or completely negated.

Mitigation Measures:

Project treatments would be planned to occur after August 31 to mitigate for any impending impacts or disturbance to raptors utilizing the area. If project activities were to occur during the nesting season (March 1 – August 31), raptor surveys would be required, and no tree removal would be allowed within 0.5 mile of an occupied nest site.

Non-USFWS Designated (Big Game Species)

One of the major problems facing big game populations in Utah is that many of the crucial ranges are in late successional plant community stages that are dominated by increasing densities of pinyon-juniper or other conifer trees (UDWR 2008). The tree-dominated habitats occupied by persistent pinyon-juniper adjacent to the project area offer a place to retreat from severe weather and to find thermal cover, but these areas may offer little in the way of forage. That is why it is important to maintain mosaic patterns of habitat that can provide forage, cover, and water. Treatment of the encroachment pinyon-juniper sites can successfully maintain this area as a grassland/shrubland community, thus enhancing and promoting the return of sagebrush and other perennial understory species which will benefit big game habitat for the long term. The entire project area is identified as crucial winter elk habitat. BLM seasonal timing restrictions for elk crucial wintering range will be implemented and no treatment activities will be allowed from December 1 to April 30. An exception may be granted if elk are not present.

4.3. Alternative B — No Action

Under the No Action Alternative, current resource trends would continue, no tree removal would occur.

4.3.1. Fuels and Fire Management

Fuels Management:

Under the no action alternative, there would be no removal of the PJ trees across the project area. Over time the PJ trees would eventually out-compete the shrubs, grasses, and forbs for water, nutrients, and light, resulting in the loss of the sagebrush habitat type in the project area. Over time, the fuel loading would continue to increase, eventually shifting the project area from the existing Condition Class II to a Condition Class III situation. In the absence of disturbance or

management, the majority of these landscapes will become closed woodlands resulting in the loss of understory plant species and greater costs for restoration (Miller et al. 2008).

Under the no action alternative there would be a continued progression of mature sagebrush species with declining vigor and growth. The current sagebrush would become decadent and there would be an increase in the dead component in the crowns and individual species.

Fire Management:

Eventually, an unplanned wildland fire is expected to occur, and since the fuel loadings would have increased, the severity of the fire event is also expected to be greater. Since the increased amount of PJ tree densities would have correspondingly decreased the amount of understory plants, the loss of trees from an unplanned fire event would most likely result in increased soil erosion due to the lack of ground cover remaining following the fire event.

4.3.2. Invasive Plants/Noxious Weeds, Soils and Vegetation

Invasive Plants/Noxious Weeds

Invasive and noxious weed populations would still establish in the project area, but not as a result of the proposed action. Existing invasive plant and noxious weed species that may already be present in the project area would not be located or treated as a result of the proposed action. Therefore, these infestations could continue to spread. Known infestations of invasive and noxious weeds within the proposed project area would continue to receive regular (annually) herbicide treatments to control their spread.

Vegetation

Under the no action alternative, pinyon and juniper trees would not be removed from the project area. Pinyon and juniper trees may continue to expand and grow into the sagebrush-steppe plant community an unknown rate. This may lead to a decrease in sagebrush and sagebrush-steppe plant communities in the proposed project area over time.

4.3.3. Plants: Utah BLM-Sensitive

Barneby catseye (*Cryptantha barnebyi*), Graham beardtongue (*Penstemon grahamii*), and White River beardtongue (*Penstemon scariosus* var. *albifluvis*)

The No Action alternative would have little to no impact on Barneby catseye, Graham beardtongue, and White River beardtongue and/or their habitat.

4.3.4. Lands with Wilderness Characteristics (LWC)

Under this alternative there would be approximately 978 acres of mastication treatment within the Bitter Creek unit. The mastication treatment is expected to result in leaving piles of woody matter composed of 1-2 inch chips. The piles would be less than one foot high, and resemble compost type piles. The piles would be scattered, diffuse, and isolated enough that the average observer would not perceive the woody matter as a substantial impact to naturalness. The mastication treatment would not leave behind any man-made structures, and since there would be no mastication work during times of saturated soil conditions, there would be a minimal

amount of tire tracks across the project area. Those tracks that are made would likely blend into the landscape of the project area within one to two years following treatment as they have been found to be in other similarly treated areas. The project boundaries follow the natural sage brush openings and there would be no residual long term sharp contrasts or straight edge effects left upon the landscape in the project area.

As noted in Chapter 3, several previous mastication projects totaling approximately 1,963 acres have been conducted in this area of wilderness characteristics. These projects have not been found to have degraded the quality of the relevant values that comprise the wilderness characteristics, and based on this evidence the proposed action is not expected to degrade these characteristics either. In compliance with Secretarial Order 3310 and under BLM's Instruction Memorandum 2011-034, the 6300-2 manual "Consideration of Lands with Wilderness Characteristics in the Land Use Planning Process" BLM may approve projects in lands with wilderness characteristics under some circumstances (6300-2 manual .24) In light of the above analysis, the proposed action is anticipated to create no impacts to wilderness characteristics due to limited ground disturbance and modest changes in the vegetation community.

4.3.5. Wildlife

Migratory Birds

The expected regeneration of P-J into sagebrush ecosystems would continue. The understory decline is expected to only minimally affect Migratory Birds in the short term, but the long term will result in a loss of understory and habitat for birds species associated with that particular vegetation type. Migratory Bird species will utilize more area than just the project area.

Raptors

Under this alternative, impacts to raptors would be slight, as the prey base is not expected to change drastically over the short term, but long term impacts resulting from regeneration of P-J would result in a loss of understory species and prey species associated with that particular vegetation type. Raptors will utilize more area than just the project area.

Non-USFWS Designated (Big Game Species)

There would be a slow and steady decline in terms of forage quality, as the understory grasses and forbs decline and the P-J trees cover increases in the project area further. It has been shown that when PJ cover increases overtime from phase I to phase III, forage AUMS can decrease by 60% which negatively affects both livestock and wildlife (McLain 2012).

4.4. Cumulative Impact Analysis

"Cumulative impacts" are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

4.4.1. Fuels and Fire Management

The Cumulative Impact area for fuels and fire management is the Vernal Field Office. Past, present, and reasonably foreseeable actions include other vegetation treatments, mineral

development, wildfire management, and livestock grazing. Cumulative impacts include vegetation manipulation, or disturbance through treatments and/or surface disturbance. Since 2004, The Vernal Field Office of the Bureau of Land Management has been involved with the Utah Partners for Conservation and Development to take actions to restore declining habitat conditions in the sage steppe habitat type. Approximately 100,000 acres have been treated to date, and continued actions by this group are expected to continue to occur in the future through the use of mechanical, prescribed fire, chemical applications, and wildland fire use to manage the vegetative resource.

The Bureau of Land Management has been directed by Congress (2001 Updated Federal Wildland Fire Management Policy) to implement actions designed to reduce decades of accumulation of hazardous fuels on public lands. In the future in the Vernal Field Office, hazardous fuel reductions activities will most likely increase through the use of mechanical, prescribed fire, and wildland fire use to manage the vegetative resource. With the increased hazardous fuel reductions, the Field Office landscape will eventually be composed of different age classes of vegetation. The Proposed Action would contribute 932 acres of habitat treatment. The No Action alternative would not result in an accumulation of impacts.

4.4.2. Invasive Plants/Noxious Weeds, Soils and Vegetation

Invasive Plants/Noxious Weeds

The CIAA area for invasive plants/noxious weeds is the Vernal Field Office management boundary. Past disturbances, both human and natural, have provided soil and vegetation disturbance allowing for the invasion of noxious weeds. Past development, management activities, and recreational activities often employed inadequate weed prevention and control measures. As a result, the infestations of Canada thistle, bull thistle, cheatgrass, and black henbane occur within, and around, the proposed project area. Current and reasonably foreseeable actions in the CIAA that include soil or vegetation disturbance require implementation of weed prevention and mitigation practices such as those described in Chapter 4.2.2. Therefore, the risk of spread of existing infestations from the above-listed actions is considered to be low. Under all alternatives, known weed infestations may provide seed source for expansion elsewhere in the project area. The risk of expansion of these infestations would be variable, depending on the location and extent of future disturbances and their proximity to existing untreated infestations. Invasive plants and noxious weeds occur within the cumulative impact area and all past, present, and foreseeable actions within the cumulative impact area have contributed to noxious weed infestations.

Vegetation

The CIAA for vegetation is the Vernal Field Office management boundary. Since 2004, The Vernal Field Office of the Bureau of Land Management has been involved with the Utah Partners for Conservation and Development to take actions to restore declining conditions in sagebrush-steppe habitat. The Vernal Field Office Weed Monitoring and Control program would continue to treat weed infestation areas. The No Action alternative would not result in an accumulation of impacts.

4.4.3. Plants: Utah BLM-Sensitive

Barneby catseye (*Cryptantha barnebyi*)

The Cumulative Impact Analysis Area for Barneby catseye is the known range of the species, defined by the extent of the Green River Formation and associated Members of geology the species

inhabits on the east Tavaputs Plateau (238,116 hectares). Past, present, and reasonablyforeseeable actions within the CIAA include recreational activities, livestock grazing, oil and gas production, mining, wildlife management areas, and activities on private land including agriculture and gravel pits. Barneby catseye has been documented near the proposed project area and will continue to be impacted by surface-disturbing activities in the CIAA. Cumulative impacts from surface disturbance include dust impacts to plants, habitat destruction, loss, and fragmentation, increased spread of noxious and invasive weeds, and disturbance to native plant communities and native pollinators and their habitat. Under the proposed action, some surface disturbance will occur in habitat and near plants, but the reduction in hazardous fuels will be of benefit to the species as it will decrease the potential of stand replacing wildfire(s) within Barneby catseye habitat . The No Action Alternative would not result in an accumulation of impacts.

Graham beardtongue (*Penstemon grahamii*)The Cumulative Impact Analysis Area for Graham beardtongue is the known range of the species on east Tavaputs Plateau, defined by the extent of the Green River Formation and associated Members of geology the species inhabits (238, 116 hectares). Past, present, and reasonably foreseeable actions within the CIAA include recreational activities, livestock grazing, oil and gas production, mining, wildlife management areas, and activities on private land including agriculture and gravel pits. Graham beardtongue has been documented near the proposed project area and will continue to be impacted by surface-disturbing activities in its range. Cumulative impacts from surface disturbance include dust impacts to plants, habitat destruction, loss, and fragmentation, increased spread of noxious and invasive weeds, and disturbance to native plant communities and native pollinators and their habitat. Under the proposed action, some surface disturbance will occur in habitat and near plants, but the reduction in hazardous fuels will be of benefit to the species as it will decrease the potential of stand replacing wildfire(s) within Graham beardtongue habitat . The No Action Alternative would not result in an accumulation of impacts.

White River beardtongue (*Penstemon scariosus* var. *albifluvis*)

The Cumulative Impact Analysis Area for White River beardtongue is the entire known range of the species, defined by the extent of the Green River Formation and associated Members of geology the species inhabits on the Tavaputs Plateau (238,116 hectares). Past, present, and reasonably foreseeable actions within the CIAA include recreational activities, livestock grazing, oil and gas production, mining, wildlife management areas, and activities on private land including agriculture and gravel pits. White River beardtongue has been documented near the proposed project area and will continue to be impacted by surface-disturbing activities in its range. Cumulative impacts from surface disturbance include dust impacts to plants, habitat destruction, loss, and fragmentation, increased spread of noxious and invasive weeds, and disturbance to native plant communities and native pollinators and their habitat. Under the proposed action, some surface disturbance will occur in habitat and near plants, but the reduction in hazardous fuels will be of benefit to the species as it will decrease the potential of stand replacing wildfire(s) within White River beardtongue habitat . The No Action Alternative would not result in an accumulation of impacts.

4.4.4. Lands with Wilderness Characteristics (LWC)

Project area is within Bitter Creek inventory unit which was considered to contain Lands with Wilderness Characteristics (LWC). The initial phase of this project will affect the LWC by having equipment and personnel within the project area producing noise and visual contrast against the landscape. Upon completion of this project the landscape will recover back to a natural ecosystem

and to the current LWC. Based on Best Management Practices and the low density of small trees, it is not likely that the casual observer would notice the vegetation treatments within 5 years of the projects implementation. Best Management Practices for these actions include low stump cut heights of 1 foot or less with bucking (cutting trees into small segments) instead of leaving whole trees). In some instances it would be preferable for mastication as no tree fragments will remain and tracks from mastication machine have shown to not be noticeable between 1–3 years in other treatments with like soils and vegetation within the area. Additionally, color line form and texture will not be noticeably changed based on only sagebrush of certain heights being removed and only new growth trees (usually less than 5 feet and an average of around 3 feet being removed.) Therefore, color, landform and line will not likely be noticeable to the casual observer. There will be no long term cumulative effects.

4.4.5. Wildlife

Migratory Birds and Raptors

The Cumulative Impact area for wildlife is the Vernal Field Office The Vernal Field Office has been involved in maintaining and restoring declining habitat conditions in the sage-steppe and P-J dominant habitat types. These habitat improvement projects would typically be comprised of removing P-J encroachment from sagebrush, restoration of cheatgrass infested sagebrush types, and sagebrush manipulation projects that have a seeding component that improves understory conditions. It is also expected that P-J removal would occur within sage-steppe habitat types and P-J dominant sites where fire has been suppressed. These treatment practices are anticipated to continue to occur in the future. BLM and UDWR have been and are currently working on Boulevard Ridge to improve and maintain mountain browse and sagebrush vegetation, improve and increase mule deer and elk habitat, and improve the transitional range for mule deer for current and future use. The No Action Alternative would not result in an accumulation of impacts.

Non-USFWS Designated (Big Game Species)

The Cumulative Impact area for Big Game is the area within the Bookcliffs hunting unit. The entire project area (932 acres) is identified by BLM as crucial winter elk habitat. Current population estimates for the elk for the Bookcliffs Unit is 5,600 which is below the population objective of 7,500 (UDWR 2016). Presently, the Bookcliffs hunting unit is open to limited entry permits for both deer and elk. Current population estimates for the mule deer for the Bookcliffs Unit is 7,750 which is below the population objective of 15,000 (UDWR 2016). Presently, the Bookcliffs hunting unit is open to limited entry permits for both deer and elk. Since elk and mule deer population numbers are below the established herd management objective numbers, management goals are to increase elk and mule deer numbers until herd objective numbers are realized. As herd numbers increase, there will be a continued need to improve, maintain and/or increase forage through vegetation treatments to support and sustain a healthy elk herd. The Vernal Field Office has been involved in restoring declining habitat conditions in the sage-steppe and P-J dominant habitat types. According to the UDWR Range Trend Study data a study site (Massey Junction-Study No. 10R-29) that is just east of the project area indicates that the deer desirable components index in 1999 ranked the area in fair condition and in 2015 was ranked in poor condition. Anticipated habitat improvement projects in or near the area would typically be comprised of removing or thinning P-J trees from sagebrush, restoration of cheatgrass infested sagebrush ecotypes, and sagebrush manipulation projects that have a seeding component that improves understory conditions to address wildlife habitat suitability changes and fuel break needs. It is also expected that P-J removal would occur within sage-steppe habitat types and P-J

dominant sites where fire has been suppressed. These treatment practices are anticipated to continue to occur in the future. The No Action Alternative would not result in an accumulation of impacts. The No Action Alternative would not result in an accumulation of impacts.

Chapter 5. Tribes, Individuals, Organizations, Preparers, or Agencies Consulted:

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During preparation of the EA, public involvement consisted of posting the proposal on the back office for ePlanning. Issues or impacts identified through the interdisciplinary team analysis process are described in Appendix B.

Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
State Historic Preservation Officer (SHPO)	National Historic Preservation Act Section 106	The current project was determined to be an *Undertaking* per 36 CFR 800.16(y). The area of potential effect (APE) 36 CFR 800.16(d) is considered to be the area within the polygons in the attached maps. L&S projects consist of using hand carried chainsaws to limb and drop trees. The branches and tree trunks will be left to decompose naturally. Access to the project area during the implementation stage of the project will be on existing roads. No new roads will be created during this undertaking. Pursuant to 36 CFR 800.5(b) a "no adverse effect" was sent to the State Historic Preservation Office (SHPO) on May 18, 2016. We received the SHPO concurrence to our determination on July 18, 2016.
Utah Division of Wildlife Resources (UDWR)	Coordination with UDWR Habitat Manager, Miles Hanberg	Coordinated in person (2015). UDWR supports the project.
Tribes	Government to Government Consultation Policy	Tribal consultation was conducted on 6/2/2016. We received one "no effect" letter from the Hopi Tribe on 6/7/2016. They did request to be contacted if we discovered new information while conducting the treatment. We received a comment letter from the Santa Clara Tribe outside of the 30 day consultation period. They had several questions. Ester McCullough, Vernal Field Office Manager, called the Tribe on 7/13/2016 and discussed their concerns. One concern was that we would be burning the L&S trees and we are not planning on doing that. We are just cutting down the trees and scattering the branches to be left to naturally decompose. She answered the rest of their questions and they said they didn't need further information. No other comments were received. Also, the proposed project will not hinder access to or use of Native American religious sites.

For a list of preparers see Appendix A

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Chapter 6. References

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Appendix A. Interdisciplinary Team Checklist

Project Title: Boulevard Ridge Lop and Scatter Maintenance Project

NEPA Log Number: DOI–BLM–UT–G010–2016–0023–EA.

File/Serial Number:

Project Leader: Natasha Hadden

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality & Greenhouse Gas Emissions	Dust and vehicle emissions would be generated during the project. However, impacts from emissions are expected to be short term (during the project only) and indistinguishable from background emissions as measured by monitors or predicted by models. Greenhouse gas emissions: No greenhouse gas standards have been established by EPA or other regulatory authorities. The assessment of greenhouse gas emissions and climate change is in its earliest stage. Global greenhouse gas models can be inconsistent, and localized models are lacking. Consequently, it is not technically feasible to quantify the net impacts to climate based on local greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.	Stephanie Howard	5/16/2016
NP	BLM Natural Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	William Civish	5/03/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Cultural: Archaeological Resources	The current project was determined to be an *Undertaking* per 36 CFR 800.16(y). The area of potential effect (APE) 36 CFR 800.16(d) is considered to be the area within the polygons in the attached maps. Lop & Scatter (L&S) projects consist of using hand carried chain saws to limb and drop trees. The branches and tree trunks will be left to decompose naturally. Access to the project area during the implementation stage of the project will be on existing roads. No new roads will be created during this undertaking. Pursuant to 36 CFR 800.5(b) a "no adverse effect" will be sent to the State Historic Preservation Office (SHPO) prior to implementation of project.	Kathie Davies	5/16/2016
NI	Cultural: Native American Religious Concerns	Tribal consultation was conducted on 4/15/2011. We received two "no effect" letters one from the Pueblo of the Laguna and one from the Hopi Tribe. No other comments were received. Also, the proposed project will not hinder access to or use of Native American religious sites.	Kathie Davies	5/16/2016
NP	Designated Areas: Areas of Critical Environmental Concern	None are present in the project area per the Vernal Field Office RMP and GIS review.	William Civish	5/03/2016
NP	Designated Areas: Wild and Scenic Rivers	None are present in the project area per the Vernal Field Office RMP and GIS review.	William Civish	5/03/2016
NP	Designated Areas: Wilderness Study Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	William Civish	5/03/2016
NP	Environmental Justice	No environmental justice communities or populations are present in or near the project area, therefore none would be disproportionately adversely affected by the project.	Stephanie Howard	5/13/2016
NP	Farmlands (prime/unique)	No prime or unique farmlands exist in or near the proposed project area.	Stephanie Howard	5/13/2016
PI	Fuels/Fire Management	The project is designed to reduce 932 acres pinyon pine and Utah juniper tree regrowth within a sagebrush ecosystem. The project will decrease hazardous fuels and decrease fire behavior within the project site. Overall the Fire and Fuel Resource will be benefited by the proposed project.	Blaine Tarbell	06/10/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Geology/Minerals/ Energy Production	The 2008 Vernal Field Office Record of Decision and Approved Resource Management Plan lists oil, gas, Gilsonite, oil shale, tar sands, coal and phosphate as valuable leasable minerals in the field office area. It also identifies locatable minerals such as gold, copper and uranium and mineral materials such as stone and aggregate. Spatial analysis of the Boulevard Merge shapefile within Sections 8,17,18,19,20 of T13S R25E and Sections 23, 24 of T13S R24E indicates conflicts with the P.R. Spring Special Tar Sand Area however, no interaction or related encounters are expected from lop and scatter activities, or to other minerals, commodities and energy production in the listed sections.	Joseph Islas	5/19/2016
NI: Soils	Invasive Plants/ Noxious Weeds, Soils & Vegetation	**IP/NW:** Per VFO GIS review, there are known occurrences of the noxious weeds *Cirsium arvense* (Canada thistle), *Cirsium vulgare* (bull thistle), *Hyoscyamus niger* (black henbane), and *Bromus tectorum* (cheatgrass) in the proposed project area. Removal of pinyon-juniper has the potential to spread and/or introduce invasive plants in the proposed project area. Continued treatment of existing infestations and surveys for new infestations will help limit noxious weed spread. In addition, following BMPs (*e.g.*, power washing equipment prior to entering the project areas, avoidance of infested areas, *etc*.) will help prevent the spread and introduction of invasive and noxious plant species. **Soils**: The NRCS mapped the soils on the project area as Moonset-Whetrock association. These soils are typically channery loams on northeastern 14 percent slopes under pinyon pine and Utah juniper at elevation of around 7,300 feet. Area exhibits Ustic soil moisture, bordering on aridic. Mean soil temps are around 44 — 47 degree F. Depth to bedrock varies and is around 10 to 20 inches. Parent material is typically slope alluvium and colluvium derived from sandstone and shale. Mean Precipitation is around 12 to 16 inches. Biological soil crusts at various stages of growth are common throughout the area. The current project would not alter or affect	IP/NW and Vegetation: Matt Lewis Soils: James Hereford II	4/18/2016 4/27/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		these soils to a degree that would require detailed analysis since the nature of the project is to lop and scatter pinyon junipers, which would have very little impact to native soils. **Vegetation:** Plant communities present in the proposed project area include: pinyon-juniper woodlands, Wyoming big sagebrush-steppe, greasewood flats, and mixed desert-salt-shrub communities. While removing pinyon-juniper, the proposed action has the potential to benefit sagebrush and sage-steppe plant communities in the project area(s).		
NI	Lands/Access	The proposed area is located within the Vernal Field Office Resource Management Plan area, which allows for oil and gas development with associated road, pipeline and power line rights-of-way. Current land uses, within the area identified in the proposed action and adjacent lands, consist of existing oil and gas development, wildlife habitat, recreational use, and sheep and cattle ranching. No existing land uses would be changed or modified by the implementation of the proposed action. Master Title Plats have been reviewed for conflicts with Public water Reserves, or existing ROW holders. No Public Water Reserves were identified in the project area per the Master Title Plats. Access to the proposed is via Boulevard Ridge Uinta County Road Class D Road and other County Class D Roads.	Craig Newman	5/20/2016
PI	Lands with Wilderness Characteristics (LWC)	Project area is within Bitter Creek inventory unit which was considered to contain Lands with Wilderness Characteristics (LWC). The initial phase of this project will affect the LWC by having equipment and personnel within the project area producing noise and visual contrast against the landscape. Upon completion of this project the landscape will recover back to a natural ecosystem and to the current LWC. Based on Best Management Practices and the low density of small trees, it is not likely that the casual observer would notice the vegetation treatments within 5 years of the projects implementation. Best Management Practices for these	William Civish	5/03/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		actions include low stump cut heights of 1 foot or less with bucking (cutting trees into small segments) instead of leaving whole trees). In some instances it would be preferable for mastication as no tree fragments will remain and tracks from mastication machine have shown to not be noticeable between 1–3 years in other treatments with like soils and vegetation within the area. Additionally, color line form and texture will not be noticeably changed based on only sagebrush of certain heights being removed and only new growth trees (usually less than 5 feet and an average of around 3 feet being removed.) Therefore, color, landform and line will not likely be noticeable to the casual observer. There will be no long term cumulative effects.		
NI	Livestock Grazing & Rangeland Health Standards	The project is located in the Atchee Ridge AMP allotment. The allotment has not been evaluated for rangeland health or permit renewal. However, in accordance with the FOR-20 RMP decision, any additional forage generated through projects must be allocated 60% to suspended, 40% to wildlife. If all suspended AUMS are restored then additional forage is to be split 50/50 between livestock and wildlife. In the future, the permittee will be able to request additional AUMS for the allotment based on vegetations projects that produce forage value vegetation.	Dusty Carpenter	5/20/2016
NI	Paleontology	Fossils managed by the BLM are considered a natural heritage resource administered under FLPMA (Pub. L. 94-579, 1976) and NEPA (Pub.L.91-190, 1970). Spatial analysis of the subject area indicates no Paleontological localities within the Lop and Scatter Boulevard Merge shapefile. No direct impacts to Paleontology are expected but discoveries should be reported to the Paleontological officer located at the Vernal Field Office.	Joseph Islas	5/19/2016
PI	Plants: BLM Sensitive	A review of VFO GIS layers indicates that the BLM-Sensitive plants *Cryptantha barnebyi* (Barneby catseye), *Penstemon grahamii* (Graham beardtongue), *Penstemon scariosus* var. *albifluvis* (White River beardtongue) and/or their habitat have potential to be in the proposed project area.	Matt Lewis	4/18/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Plants: Threatened, Endangered, Proposed, or Candidate	A review of VFO GIS layers indicates that no threatened, endangered, proposed, or candidate plant species or their habitat are present in the proposed project area.	Matt Lewis	4/18/2016
NP	Plants: Wetland/Riparian	There are no inventoried wetlands or riparian areas in the proposed project area and GIS review confirms this. There are ephemeral stream drainages present in the proposed project area. However, because the treatments will only occur in the sagebrush-steppe plant communities, there is likely to be little effect on these ephemeral streams and associated plant communities.	Matt Lewis	4/18/2016
NI	Recreation	The primary recreational opportunities in this area of hunting, wildlife viewing and ATV/UTV ridding will not change with this project. It is not likely that the proposed treatment would have any impact to the currently identified recreation opportunities within the area. During the actual project implementation phase, the sights and sounds could have minor impacts to individuals recreating in the area as they would likely see and hear the equipment use in progress. The impact would be short term in nature and would not likely displace any visitors to public lands.	William Civish	5/03/2016
NI	Socio-Economics	No impacts to the social or economic status of nearby populations or counties would occur due to the remoteness of the area and the small scale of the project.	Stephanie Howard	5/13/2016
NI	Visual Resources	The proposed project is in a VRM Class III area, per the Vernal Field Office GIS Data Base & RMP/ROD. The objective of Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Based on Best Management Practices and the low density of small trees, it is not likely that the casual observer would notice the vegetation treatments within 5 years of the projects implementation. Best Management Practices for these actions include low stump cut heights of 1 foot or less with bucking (cutting trees into	William Civish	5/03/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		small segments) instead of leaving whole trees). In some instances it would be preferable for mastication as no tree fragments will remain and tracks from mastication machine have shown to not be noticeable between 1–3 years in other treatments with like soils and vegetation within the area. Additionally, color line form and texture will not be noticeably changed based on only sagebrush of certain heights being removed and only new growth trees (usually less than 5 feet and an average of around 3 feet being removed.) Therefore, color, landform and line will not likely be noticeable to the casual observer.		
NI	Wastes (hazardous/solid)	*Hazardous Waste:* No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the project. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the project. *Solid Wastes:* Trash would be confined in a covered container and hauled to an approved landfill. Burning of waste or oil would not be done. Human waste would be contained and be disposed of at an approved sewage treatment facility.	Natasha Hadden	4/25/2016
NI	Water: Floodplains	A review of the Field Office GIS layer files indicates that there are no 100 year flood plains located in the project area. The closest mapped floodplain is approximately 1 mile to the west of the project area indicated by Vernal GIS layers.	James Hereford II	4/27/2016
NI	Water: Groundwater Quality	Spatial review of the proposed Lop and Scatter Boulevard Merge Shapefile indicates that activities will involve a minor amount of surface disturbance and interaction with groundwater is not anticipated.	Joseph Islas	5/19/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Water: Hydrologic Conditions (stormwater)	The project area drains into the Lower White River watershed. Most water in the area either drains into the White river or goes to groundwater with various expressions throughout the area.. The main soil type as mapped by NRCS is Upland Stony Loam. These soils have moderate infiltration rates based on the nature of loamy soils.. The current proposal will not affect current hydrologic conditions in the area because the nature of the project is to lop and scatter existing pinyon juniper trees, which would increase litter amounts. This will not alter current hydrologic conditions to a degree that would require detailed analysis at this time.	James Hereford II	4/27/2016
NP	Water: Surface Water Quality	The area has small natural drainage features with no perennial waters on the current proposed project area as per GIS review, RMP review, and on the ground investigations.	James Hereford II	4/27/2016
NP	Water: Waters of the U.S.	The current proposed project will not affect any waters of the U.S., as per GIS review, RMP review, and on the ground investigations.	James Hereford II	4/27/2016
NP	Wild Horses	No Wild Horse Herd Areas are in the project area.	Dusty Carpenter	5/2/2016
PI	Wildlife: Migratory Birds (including raptors)	Potential impacts to habitat and nesting.	Natasha Hadden	4/25/2016
PI	Wildlife: Non-USFWS Designated	BLM has designated crucial winter habitat for elk within the project area. Project should enhance habitat.	Natasha Hadden	4/25/2016
PI	Wildlife: Threatened, Endangered, Proposed or Candidate	No critical habitat has been identified within the project area.	Natasha Hadden	4/25/2016
NI	Woodlands/Forestry	Project will not impact woodlands or forest resources.	Dave Palmer	8/2/2016

FINAL REVIEW:			
Reviewer Title	**Signature**	**Date**	**Comments**
Environmental Coordinator			
Authorized Officer			